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Six new species and a new country record of *Coleoxestia* Aurivillius, 1912 (Coleoptera, Cerambycidae, Cerambycinae)

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Coleoxestia Aurivillius, 1912
(Coleoptera, Cerambycidae, Cerambycinae)

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Six new species and a new country record of *Coleoxestia* Aurivillius, 1912 (Coleoptera, Cerambycidae, Cerambycinae)

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Abstract. Six new species of *Coleoxestia* Aurivillius, 1912 (Cerambycidae, Cerambycinae, Cerambycini) are described: *C. clarkei* from Bolivia; *C. chemsaki* and *C. eyai* from Peru; *C. fragosoi* and *C. rafaeli* from Brazil; and *C. hovorei* from Ecuador. *Coleoxestia rachelae* Eya and Chemsak is also newly recorded from Peru (new country record). Dorsal, ventral and lateral illustrations along with illustrations of various other structures are provided for each of the new species. In some cases, existing key couplets by Eya and Chemsak (2005) or Martins and Monné (2005) are modified to help separate a new species from similar existing species. A reproduction of the general descriptive terminology for the head, prothorax and antennomeres of *Coleoxestia*, from Fragoso (1993), is also included in the illustrations.

Key Words. Cerambycini, key, Sphallotrichina, Neotropical region, taxonomy.

Introduction

Currently *Coleoxestia* Aurivillius, 1912 includes 49 species and one subspecies distributed from Mexico to southern South America (Bezark 2017). Nearly half of the species have been described in the 21st century by Eya and Chemsak (2005) (7), Martins and Monné (2005) (8), Galileo and Martins (2006) (1), (2010) (1), Galileo et al. (2015) (1) and Galileo and Santos-Silva (2016) (4). Six additional new species are described herein from Bolivia (1), Brazil (2), Ecuador (1), and Peru (2), increasing the number of described species to 55.

Coleoxestia are, for the most part, very similar in shape and structure, making it difficult to define and determine the species. However, quality photographs of comparative structures of individual specimens (such as pronotal sculpture, antennal shape, shape of elytral apex and sculpture, pro-, meso- and metafemora, among other structures) greatly enhance the ability to separate the species and are used extensively here.

Materials and Methods

Photographs were taken with a Canon EOS Rebel T3i DSLR camera with Canon MP-E 65mm f/2.8 1–5x macro lens, and successive exposures were assembled by Zerene Stacker AutoMontage software. Measurements were taken in “mm” using a measuring ocular Hensoldt/Wetzlar - Mess 10 in a Leica MZ6 stereomicroscope, also used in the study of the specimens.

The terminology for the head (Fig. 1), prothorax (Fig. 2) and antennomeres (Fig. 3) follows that of Fragoso (1993). The *Coleoxestia* keys by Martins and Monné (2005) and Eya and Chemsak (2005) contain characters that are too variable to allow separation of some of the new species from previously described ones, and hence are of limited use.

The collection acronyms used in this study are as follows:

- ACMT** – American Coleoptera Museum (James Wappes), San Antonio, Texas, USA;
FSCA – Florida State Collection of Arthropods, Gainesville, Florida, USA;
FWSC – Frederick W. Skillman Jr. Collection, Pearce, Arizona, USA;
MNKM – Museo de Historia Natural, Noel Kempff Mercado, Santa Cruz de la Sierra, Bolivia;
MZSP – Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil;
RFM – Roy F. Morris II Collection, Lakeland, Florida, USA;
SWLC – Steven W. Lingafelter Collection, Hereford, Arizona, USA;
UEL – Universidade Estadual de Londrina, Londrina, Paraná, Brazil;
USNM – National Museum of Natural History, Washington D.C., USA.

Taxonomy

Coleoxestia clarkei sp. nov.

(Fig. 4–8)

Description. Holotype female. Integument black; mouthparts reddish brown with dark brown regions; antennae gradually brown toward distal segments; basal 2/3 of femoral club orange; abdominal ventrites III–IV with narrow orangish distal band.

Head. Frontal plate coarsely, confluent punctate, except smooth longitudinal middle region; with minute, erect, sparse setae on punctate area. Frontolateral depression ill-delimited; coarsely, confluent punctate; with minute, erect, sparse setae. Area between antennal tubercles opaque, smoothly, confluent punctate, glabrous. Remaining surface of vertex coarsely, confluent punctate (punctures distinctly coarser than on frontal plate); with long, erect, sparse setae close to eyes, glabrous on remaining surface. Epicranial suture distinct from frontal plate to center of region between eyes and prothoracic margin; carinate between frontal plate to middle of upper eye lobes. Area behind upper eye lobes coarsely, confluent punctate close to vertex, gradually finer, sparser toward lower eye lobe; with long, erect, sparse setae close to eye, with short, erect, sparse setae on remaining surface. Area behind lower eye lobes, closer to upper eye lobe, smooth close to eye, finely, sparsely punctate close to prothoracic margin, glabrous; area closer to ventral surface of head coarsely, confluent, smoothly punctate close to eye, followed by oblique, wide, almost smooth band, gradually finely, densely striate-punctate in triangular area closer to prothoracic margin (wider toward ventral surface of head); punctate area close to eye with long, erect, sparse setae, remaining surface glabrous. Antennal tubercles finely, moderately abundantly punctate; with minute, erect, sparse setae. Genae finely, sparsely punctate, except for smooth area closer to base of mandible; with short, sparse setae (slightly denser close to eye) interspersed with long, erect, sparse setae, except for glabrous smooth area. Submentum minutely, abundantly punctate (mainly centrally), interspersed with coarse, sparse punctures; with short, abundant setae interspersed with long, erect, sparse setae. Postclypeus opaque, finely, sparsely punctate, mainly centrally, except for shining, smooth lateral area; with minute, sparse setae (mainly centrally), except for glabrous lateral area, with one long, erect seta close to shining area. Labrum coplanar with clypeus, except for depressed center of distal region; with short setae interspersed with long, erect setae (more abundant distally, mainly in depressed area). Distance between upper eye lobes 0.40 times length of scape; distance between lower eye lobes in frontal view 0.75 times length of scape. Antennae 1.25 times elytral length, almost reaching elytral apex. Scape finely, abundantly punctate; with minute seta emerging from each puncture, interspersed with long, erect, sparse setae (longer and slightly more abundant ventrally). Antennomere III with long, erect setae ventrally; nodose apically. Antennomere IV gradually enlarged from base to apex; apex nodose; with long, erect setae ventrally. Antennomere V nodose at apex; with long, erect setae ventrally (sparser than on IV). Antennomere VI nodose at apex; with long, erect seta ventrally (distinctly sparser than on V). Antennomeres VII–X with apex gradually from obtusely angulose to ortho-angulose (Fig. 3). Greatest width of antennomere XI 0.15 times its length. Antennal formula (ratio) based on antennomere III: scape = 0.52; pedicel = 0.13; IV = 0.48; V = 0.59; VI = 0.62; VII = 0.61; VIII = 0.56; IX = 0.57; X = 0.54; XI = 0.76.

Thorax. Prothorax slightly wider than long (greatest width 1.1 times length); lateral tubercles distinct, with central ones almost conical; sides of prothorax coarsely, abundantly punctate (less so toward anterior margin). Pronotum with peripheral sulcus distinct only laterally; fusiform plate widened behind constriction; surface with five tubercles: one on each side of basal half, subrounded, distinct; one on each side of distal half, subrounded, less distinct; one centrally in basal half, longitudinal, clearly distinct. Pronotal surface between anterior and posterior constrictions transversely plicate, less so on longitudinal and lateral tubercles in basal half; area between ridges coarsely punctate, mainly close to longitudinal tubercle; with long, erect, sparse setae laterally and dorsally in basal quarter. Prosternum obliquely inclined, from prosternal process to middle, coarsely, sparsely punctate (smooth centrally), with short, decumbent, abundant setae (distinctly sparser laterally, glabrous centrally) interspersed with long, erect, sparse setae; distal half tumid from middle to peripheral sulcus, with short, decumbent setae centrally, interspersed with long, erect, sparse setae; area from peripheral sulcus to anterior margin glabrous. Prosternal process longitudinally sulcate centrally; with short, decumbent setae interspersed with long, erect setae laterally and distally. Mesoventrite, mesepimeron and mesaepisternum with short, decumbent, abundant setae. Mesoventral process deeply emarginated centrally; without tubercle. Metaepisternum and narrow band on sides of metaventrite with short, decumbent, abundant setae; remaining surface of metaventrite with minute, very sparse setae interspersed with a few long, erect setae. Scutellum with short, decumbent, abundant setae laterally. **Elytra.** Shining, very finely, moderately abundantly punctate; basal third vermiculate into network with a puncture in center, gradually less distinct toward middle; distal quarter with minute, sparse setae, interspersed with long, sparse, erect setae; apex bispinose. **Legs.** Femora clavate; apices of meso- and metafemora with rounded lobe; ventral side of peduncle of profemora coarsely, confluent punctate; ventral side of peduncle of meso- and metafemora distinctly finer, less punctate than on profemora.

Abdomen. Ventrites with minute sparse setae interspersed with long, sparse setae (minute and long setae more abundant on ventrite V); apex of ventrite V rounded.

Male (Fig. 7). Differs from female mainly by the longer antenna (left antenna entirely ill-formed in the single paratype male), 1.4 times elytral length, slightly surpassing or just reaching elytral apex. Apex of ventrite V truncate, widely emarginate centrally.

Variation. Area of vertex between upper eye lobes and prothorax finely, sparsely punctate in male paratype; central lateral tubercle of prothorax distinctly conical; basal third of elytra not vermiculated into network.

Dimensions in mm (holotype/paratype male/paratype female). Total length 29.90/21.10/27.75; length of prothorax at center 4.55/3.35/4.25; greatest width of prothorax 4.95/3.70/4.70; anterior width of prothorax 3.60/2.80/3.40; posterior width of prothorax 4.55/3.30/4.15; humeral width 6.90/4.75/6.50; elytral length 19.65/14.20/19.50.

Type material. Holotype female from BOLIVIA, *Santa Cruz*: 4-6 km SSE Buena Vista (Hotel Flora and Fauna), 1-8.XI.2002, J. E. Wappes col. (MNKM). Paratypes – BOLIVIA, *Santa Cruz*: 4 km SSE Buena Vista (Hotel Flora and Fauna; 17°29'S / 63°49'W; 350-400 m), 1 female, 22-25.XI.2013, Wappes & Skillman col. (ACMT); 4-6 km SSE Buena Vista (Hotel Flora & Fauna; 17°29.95'S, 63°33.15'W; 400-500 m; blacklight), 2 females, 3-14.XI.2003, S. Lingafelter (SWLC); Florida (4 km N Bermejo, Refugio los Volcanes, 18°06'S / 63°36'W, 1000-1200 m), 1 male, 11.XII.2015, Skillman, Wappes and Kuckartz col. (MZSP); Haico (Andrés Ibáñez Province, near Potrerillo del Guenda; 17°40.5'S, 63°26.6'W; 425 m; mv/uv lights), 1 male, 1 female, 22-23.XI.2013, S. Lingafelter (SWLC).

Etymology. Named for Robin O. S. Clarke (Hotel Flora and Fauna, Buena Vista, Bolivia) in recognition of his many taxonomic contributions to the knowledge of New World Cerambycidae.

Remarks. *Coleoxestia clarkei* sp. nov. is similar to *C. sanguinipes* (Bates, 1884), but differs as follows: distance between upper eye lobes in male 1.50 times width of one lobe; distance between upper eye lobes in female 1.45 times width of one lobe; antennomeres dark; antennomere IV uniformly enlarged from base to apex at outer side, not enlarged near apex of inner side; sides of prothorax not distinctly plicate;

elytra shining, not or slightly vermiculate into network in basal half; tibiae entirely black. According to Fragoso (1993), one of the syntypes of *C. sanguinipes* (sex not specified, but apparently a female): distance between upper eye lobes 1.9 times width of one lobe; antennomeres reddish after distal area of antennomere III; antennomere IV abruptly enlarged near apex (both sides); sides of prothorax plicate; elytra shining (but not vitreous, distinctly duller than on pronotum) (according to Eya and Chemsak (2005): *C. sanguinipes* has “surface slightly opaque, vermiculate into network with a puncture in center”; “coriaceous in appearance”); tibiae gradually lighter toward apex. It is also similar to *C. kuratai* Eya and Chemsak, 2005, but differs by the tibiae sulcate laterally, from near base to distal third (not sulcate in *C. kuratai*), antennomere IV as above described (as in *C. sanguinipes* and in *C. kuratai*). From *C. striatepunctata* Eya and Chemsak (2005) it differs mainly by the antennomere III shorter and thicker, and the pronotum distinctly less rugose-punctate and not distinctly raised medially on basal half.

Coleoxestia clarkei sp. nov. can be included in the alternative of couplet “13” from Martins and Monné (2005). However, as some characters used in this alternative of couplet (dimensions, color, elytral sculpture) are variable in the species, they cannot be used to correctly separate it from *C. sanguinipes*, *C. polita* (Waterhouse, 1880) and *C. anthracina* Martins and Monné, 2005.

***Coleoxestia eyai* sp. nov.**

(Fig. 9–12)

Description. Holotype male. Head, thorax, scape, pedicel and antennomere III dark brown, almost black; mouthparts dark reddish brown, lighter near apex of palpomeres; antennomeres IV–XI gradually from dark brown to brown; elytra dark brown with margins black; femora dark brown on base, part of superior and inferior margin of peduncle, and distal third of club (the latter not abruptly darkened), reddish brown on remainder; protibiae entirely dark brown; mesotibiae dark brown, with reddish brown band on outer side of distal half; metatibiae dark brown, with reddish brown band on outer side of distal 3/4; tarsomere I dark brown in basal 3/4, reddish brown on remaining surface; tarsomeres II–V mostly reddish brown; ventrites dark brown, with transverse yellowish-brown band at apex of ventrites I–IV (wider toward ventrite IV).

Head. Frontal plate not well-delimited toward antennal tubercles, finely, densely, confluent punctate, except for smooth longitudinal band; with short, sparse, sub-erect setae. Frontolateral depression with sculpture and setae as on frontal plate. Area between antennal tubercles and middle of upper eye lobes with wide, smooth, glabrous carina; area between carina and upper eye lobes finely, confluent punctate, with short, sparse, erect setae, distinctly longer close to eyes. Remaining surface of vertex coarsely punctate, except for smooth central area and striate-punctate region close to prothorax; with short and minute, sparse setae. Epicranial suture distinct from middle of frontal plate to base of antennal tubercles. Area behind upper eye lobes coarsely, abundantly punctate (punctures confluent, oblong, longitudinal close to eye, striate-punctate close to prothorax); with short and long setae close to eye, glabrous on remaining surface. Area behind lower eye lobes tumid, sulcate close to eye; sulcate area coarsely, confluent punctate; remaining surface finely, sparsely punctate toward upper eye lobes, smooth toward ventral surface; tumid area with short and long, moderately abundant setae; remaining surface glabrous. Antennal tubercles coarsely punctate, except for superior area finely, sparsely punctate; with short, sparse setae in coarsely punctate region, glabrous in superior area. Genae finely, sparsely punctate; with short, sparse setae, interspersed with some long, erect setae ventrally. Submentum minutely, moderately abundantly punctate, interspersed with coarse, confluent, shallow punctures toward gula; with short, erect, moderately abundant setae interspersed with long, erect setae. Postclypeus finely, sparsely punctate centrally (punctures denser on sides of this region), smooth laterally; with short, erect, sparse setae interspersed with long, erect setae in punctate area, glabrous in smooth area. Labrum coplanar with clypeus, except for depressed center of distal region; with short setae interspersed with long setae laterally, more abundant in depressed area. Distance between upper eye lobes 0.3 times length of scape; distance between lower eye lobes in frontal view 0.6 times length of scape. Antennae 1.5 times elytral length, reaching elytral apex at basal third of antennomere XI. Scape coarsely, densely, confluent punctate basally, gradually finer, sparser toward smooth apex, coarsely rugose ventrally; with short, sparse setae, ventrally interspersed with long, erect, sparse setae.

Antennomere III with long, erect setae laterally and ventrally; apex nodose-flattened. Antennomere IV with setae as on III, but sparser; apex nodose-flattened, but outer margin not abruptly enlarged. Antennomere V with apex semi-angulose. Antennomeres VI–X with apex ortho-angulose. Antennomere XI not divided; greatest width 0.1 times its length. Antennal formula (ratio) based on antennomere III: scape = 0.68; pedicel = 0.15; IV = 0.60; V = 0.68; VI = 0.65; VII = 0.60; VIII = 0.60; IX = 0.64; X = 0.61; XI = 1.07.

Thorax. Prothorax slightly wider than long (greatest width 1.1 times length); lateral tubercles slightly distinct; sides of prothorax coarsely, confluent punctate, gradually sparser, slightly finer toward ventral side; with short, sparse setae interspersed with long, erect setae. Pronotum with peripheral sulcus, mainly centrally, ill-marked; fusiform plate ill-marked; surface with five low, poorly delimited gibbosities, two anterolateral most distinct; area between anterior and posterior constrictions smooth centrally, mainly on longitudinal gibbosity of basal half, coarsely, abundantly punctate on sides of longitudinal gibbosity, finely, sparsely punctate on sides of smooth central area at distal half and area closer to peripheral sulcus (finer, more abundant in latter area), plicate-punctate on and between lateral gibbosities, plicate between anterolateral gibbosity and punctate area closer to peripheral sulcus, coarsely, densely, confluent punctate laterally; with short, sparse setae in plicate and punctate regions, interspersed with long, erect setae in basal third laterally. Prosternum coarsely, abundantly punctate laterally in inclined region, gradually sparser toward center; finely, sparsely punctate between middle and peripheral sulcus; with short and long, moderately abundant setae in inclined region, distinctly sparser toward center; with short, sparse setae between middle and peripheral sulcus, interspersed with a few long, erect setae. Prosternal process centrally smooth, slightly carinate, laterally coarsely, densely punctate, except for entirely smooth apex. Mesoventrite, mesepimeron and mesepisternum with abundant short, decumbent, setae, distinctly sparser in central and lateral areas of mesoventrite. Mesoventral process without tubercle. Metepisternum with short, abundant, decumbent setae. Metaventricle with short, decumbent, sparse setae, slightly denser laterally, distinctly denser close to metacoxal cavity, interspersed with long, erect, sparse setae; surface finely, sparsely punctate. Scutellum with short, sparse setae laterally (dense on lateral margin), smooth centrally. **Elytra.** Shining, moderately coarsely, abundantly punctate (punctures slightly finer, sparser toward apex); with minute, sparse setae in distal quarter, interspersed with long, sub-erect, sparse setae; apex bispinose. **Legs.** Femora fusiform, finely, sparsely punctate (rugose on base of ventral side of profemora); apices of meso- and metafemora with rounded lobe. Metatibiae not sulcate laterally.

Abdomen. Ventrites with short, sparse setae (distinctly more abundant laterally, on ventrites I–V and distally on ventrite V) interspersed with long, erect, sparse setae; distal quarter of ventrite V inclined; distal margin of ventrite V widely concave.

Dimensions in mm (holotype female). Total length 26.10; length of prothorax at center 4.30; greatest width of prothorax 4.60; anterior width of prothorax 3.55; posterior width of prothorax 4.30; humeral width 6.30; elytral length 19.05.

Type material. Holotype male from PERU, *Ucayali*: Tingo Maria – Pucallpa Rd. (km 205; Puente Chino, 1300 m; 09°08.2'S / 75°47.3'W), 13.X.1999, D. Brzoska col. (FSCA).

Etymology. Named for Bryan K. Eya to recognize his many contributions (including *Coleoxestia* paper) to the taxonomy of New World Cerambycidae.

Remarks. *Coleoxestia eyai* sp. nov. differs from all other species of the genus by the elytra being moderately coarsely, abundantly punctate.

***Coleoxestia chemsaki* sp. nov.**

(Fig. 13, 16, 17–21)

Description. Holotype male. Integument dark brown; head and prothorax almost black; mouthparts reddish brown with apex of palpomeres yellowish; antennae gradually lighter toward apex, with last

antennomeres light reddish brown; margins of elytra black; femora dark brown, almost black, on peduncle and distal region of club (this latter abruptly darkened), orangish on remaining surface; tibiae dark brown, almost black, on basal 3/5, orangish on remaining surface; tarsomeres I–III reddish brown; tarsomeres IV–V brown; apex of ventrites II–IV and base of V yellowish.

Head. Frontal plate opaque, poorly delimited, with deep sulcus centrally from about middle (this sulcus continuing toward area between antennal tubercles); finely, sparsely punctate close to clypeus, almost smooth on remaining surface; with short, erect, sparse setae. Frontolateral depression well-marked, opaque, finely, sparsely punctate; with short, erect, sparse setae. Area between antennal tubercles and middle of upper eye lobes opaque, with narrow, very slightly elevated carina. Area between upper eye lobes opaque, coarsely, shallowly punctate close to eyes; with short, sparse setae interspersed with moderately long, erect setae close to eyes. Remaining surface of vertex gradually shiny toward prothorax; almost smooth centrally, coarsely punctate laterally (punctures oblong close to prothorax); glabrous. Epicranial suture distinct between middle of frontal plate to middle of area between antennal tubercles. Area behind upper eye lobes shiny, coarsely, abundantly punctate; with minute, sparse setae near eye, interspersed with long, erect setae. Area behind lower eye lobes opaque, tumid, finely, sparsely punctate, with short, sparse setae interspersed with long, erect setae; with deep, well-marked sulcus close to tumid area; area between sulcus and prothorax shining (except narrow opaque area close to sulcus), coarsely, abundantly punctate close to sulcus, finely, densely striate close to prothorax, glabrous. Antennal tubercles opaque, finely, very sparsely punctate; with very sparse, short setae. Genae opaque, except for narrow, shining distal area; with minute setae close to eye, glabrous on remaining surface, except for long, sparse setae ventrally. Submentum opaque, minutely, abundantly punctate centrally, coarsely, shallowly punctate laterally; with short, moderately abundant setae interspersed with long, erect setae. Postclypeus opaque in large central area, shining laterally; finely, sparsely punctate in opaque region, smooth in shiny region; with some long, erect setae close to shiny region. Labrum shiny, coplanar with clypeus in large basal region, abruptly inclined near apex (margin dividing these regions concave); finely, abundantly punctate laterally in coplanar region; with short setae, laterally more abundant and interspersed with long, erect setae. Distance between upper eye lobes 0.30 times length of scape; distance between lower eye lobes in frontal view 0.45 times length of scape. Antennae 1.35 times elytral length, reaching elytral apex at distal quarter of antennomere XI. Scape finely, abundantly punctate, somewhat vermiculate (mainly dorsally); with minute, sparse setae interspersed with long, erect, sparse setae. Antennomere III with long, erect, sparse setae laterally and ventrally; apex nodose. Antennomere IV with long, erect, sparse setae ventrally; apex semi-angulose. Antennomeres V–VII with apex ortho-angulose. Antennomeres VIII–X with apex acute-angulose. Antennomere XI not divided; widest width 0.1 times its length. Antennal formula (ratio) based on antennomere III: scape = sulcus well-marked throughout (shallower, narrower centrally); fusiform plate well-marked, 0.67; pedicel = 0.17; IV = 0.56; V = 0.64; VI = 0.65; VII = 0.65; VIII = 0.63; IX = 0.63; X = 0.62; XI = 0.92.

Thorax. Prothorax slightly wider than long (greatest width 1.15 times length); lateral tubercles barely visible; sides of prothorax moderately shining centrally close to pronotum, opaque on remaining surface; moderately shining area coarsely vermiculate-punctate; opaque area minutely, sparsely punctate, except some coarse punctures in anterior half; with long, erect, sparse setae. Pronotum with peripheral sulcus absent centrally; fusiform plate well-marked, widened centrally; surface with five indistinct gibbosities, two anterolateral most distinct; area between anterior and posterior constrictions plicate centrally (less so on posterolateral gibbosities), except for smooth central gibbosity in basal half, interspersed with coarse, sparse punctures; sides coarsely vermiculate-punctate; with minute, sparse setae (mainly laterally), laterally interspersed with long, erect setae (mainly in basal third). Prosternum sub-opaque; basal half minutely, abundantly punctate close to sides of prothorax and procoxal cavities, coarsely, sparsely punctate laterally, smooth centrally; with short, abundant setae (interspersed with long, erect setae) laterally, mainly close to procoxal cavities, glabrous centrally; smooth between middle and peripheral sulcus, with short, sparse setae; peripheral sulcus irregularly sculptured. Prosternal process centrally glabrous, slightly carinate, laterally finely, densely punctate, except for entirely smooth apex. Mesoventrite, mesepimeron, mesepisternum and metepisternum with short, decumbent, abundant setae. Mesoventral process tuberculate centrally. Metaventrite minutely, abundantly punctate laterally, interspersed with fine, sparse punctures (this area narrowed from mesocoxal to metacoxal cavity; remaining surface finely, sparsely punctate (punctures slightly coarser toward center); area minutely

punctate with short, decumbent, moderately abundant setae interspersed with long, sub-erect, sparse setae; remaining surface with short and long, sub-erect, sparse setae. Scutellum with short, decumbent, abundant setae. **Elytra.** Opaque, coriaceous, very finely vermiculated into network with puncture in center of nearly all areas delimited by network; with minute, sparse setae throughout, except for some long, sub-erect setae near apex; outer angle of apex with triangular projection and sutural angle with long spine; area between outer and sutural angle concave. **Legs.** Femora sub-clavate, finely, moderately abundantly punctate on base, gradually finer, sparser toward apex; apices of meso- and metafemora with rounded lobe; metafemora with fringe of long, erect setae ventrally. Metatibiae not sulcate laterally.

Abdomen. Shining; ventrites I–IV with short, decumbent, moderately abundant setae interspersed with long, sub-erect setae laterally (this area gradually wider toward ventrite IV), remaining surface with short and long, sparse setae; ventrite V with short and long, moderately abundant setae laterally and posteriorly, remaining surface with short and long, sparse setae; distal margin of ventrite V widely concave.

Variation. Apex of abdominal ventrites II–IV reddish brown; abdominal ventrite V entirely dark; sulcus on frontal plate reaching area close to clypeus; carina between antennal tubercles and upper eye lobes more distinct and elevated; punctures on antennal tubercles more abundant; opaque region of postclypeus finely punctate only at region close to shining region; peripheral sulcus absent only at center of pronotum, slightly marked laterally; area between outer and sutural angle of apex of elytra truncate.

Dimensions in mm (holotype male-paratype male). Total length 31.05–31.50; length of prothorax at center 4.30–4.45; greatest width of prothorax 4.95–4.50; anterior width of prothorax 3.70–3.60; posterior width of prothorax 4.60–4.40; humeral width 7.10–7.00; elytral length 22.80–23.85.

Type material. Holotype male from PERU, *Cusco*: Cock of the Rock Lodge (NE Paucartambo; 1400 m; 13°03.3'S / 71°31.7'W), 4-9.XI.2007, D. Brzoska col. (FSCA). Paratype male from PERU, *Junín*: Cerro Pichita Res. Sta. (2167 m), 4.XI.2009, J. B. Heppner, C. Carrera and E. Huamani col. (RFMC).

Etymology. Named for John A. Chemsak, mentor and friend of many budding taxonomists, and a major contributor to the knowledge of North American Cerambycidae (including numerous papers on the Mexican fauna).

Remarks. *Coleoxestia chemsaki* sp. nov. is similar to *C. femorata* (Gounelle, 1909) but differs as follows (male): antennomere III with sparse setae (Fig. 16); elytra (Fig. 17) narrower and distinctly longer; outer apical angle of elytra with triangular projection (Fig. 17). In male of *C. femorata* (Fig. 21) the antennomere III has abundant setae (Fig. 15), the elytra are wider and shorter (Fig. 21), and the outer apical angle of elytra (Fig. 21) has a spiniform projection. It differs from *C. sanguinipes* mainly by the elytra distinctly coriaceous, and from *C. aurigena* Martins and Monné, 2005 by the outer angle of elytra (Fig. 17) with triangular projection (rounded in *C. aurigena*, see Bezark 2017), and the metatarsomere V is shorter (Fig. 13) (longer in *C. aurigena* (Fig. 14)).

***Coleoxestia fragosoi* sp. nov.**

(Fig. 22–25, 27–29)

Description. Holotype female. Integument black (more dark brown under direct light); mouthparts dark reddish brown, slightly lighter on apex of palpomeres; antennae gradually brown toward distal segments; apex of abdominal ventrites II–IV with narrow, yellowish-brown band.

Head. Frontal plate kite-shaped, well-marked, not well-delimited toward antennal tubercles, deeply longitudinally sulcate except small area closer to clypeus; finely, abundantly punctate on sides of sulcus, except in area closer to clypeus sparsely punctate; with minute, sparse, erect setae. Frontal depression well-marked, deep, finely, abundantly punctate toward center of head, smooth toward sides. Area between upper eye lobes with smooth, slightly elevated, wide carina (general appearance tumid);

area close to eyes with shallow, slightly distinct punctures, with long, erect, sparse setae. Area between upper eye lobes and prothoracic margin coarsely, abundantly punctate (punctures more oblong toward prothorax), except for smooth central area closer to eyes; glabrous. Epicranial suture distinct from frontal plate to antennal tubercles. Area behind upper eye lobes coarsely, abundantly punctate (punctures more oblong toward prothorax; with long, erect, sparse setae close to eye. Area behind lower eye lobes narrowly tumid close to eye, smooth, glabrous toward upper eye lobe, finely punctate toward ventral side, with long, erect, sparse setae; area close to tumid region deeply sulcate, glabrous; area between sulcus and prothorax smooth closer to sulcus, finely punctate closer to prothorax. Antennal tubercles opaque, finely punctate on base, smooth toward apex. Genae finely, sparsely punctate; with minute, sparse setae, ventrally interspersed with long, erect, sparse setae. Submentum opaque, minutely punctate, with surface somewhat irregular; with short, erect setae interspersed with slightly longer setae. Postclypeus opaque in large central area, shining laterally; finely, sparsely punctate in opaque region, smooth in shiny region; with minute, sparse setae in opaque region, glabrous in shiny region; with one long, erect seta on each side of opaque region. Labrum finely, moderately abundantly punctate; anterior margin of coplanar region widely concave; with short and long sub-erect setae. Distance between upper eye lobes 0.3 times length of scape; distance between lower eye lobes in frontal view 0.5 times length of scape. Antennae 1.4 times elytral length, reaching elytral apex at basal third of antennomere XI. Scape dorsally coarsely, abundantly punctate, gradually sparser toward apex; with short, minute setae interspersed with long, erect, sparse setae (more abundant ventrally). Antennomere III with long, erect, sparse setae ventrally; apex nodose. Antennomere IV with apex semi-angulose. Antennomere V with apex ortho-angulose. Antennomeres VI–X with apex acute-angulose. Antennomere XI not divided; greatest width 0.12 times its length. Antennal formula (ratio) based on antennomere III: scape = 0.56; pedicel = 0.13; IV = 0.50; V = 0.57; VI = 0.57; VII = 0.57; VIII = 0.55; IX = 0.56; X = 0.54; XI = 0.87.

Thorax. Prothorax slightly wider than long (greatest width 1.05 times length); lateral tubercles distinct; sides of prothorax coarsely vermiculate-punctate between peripheral and semiperipheral sulcus, with a few long, erect setae. Pronotum with peripheral sulcus well-marked throughout; fusiform plate narrow; surface with five low gibbosities, central one least distinct; area between anterior and posterior constrictions plicate on disc, interspersed with coarse, moderately sparse punctures (more so laterally), except smooth central gibbosity in basal half; with short, very sparse setae on disc, with some long, erect setae laterally in basal third. Prosternum coarsely vermiculate on basal half, with some coarse, shallow punctures, distinctly sulcate along procoxal cavities, with short, abundant setae in sulcate areas, with short setae laterally, interspersed with long, erect setae, almost glabrous centrally; area between middle and peripheral sulcus somewhat striate, with coarse, shallow punctures laterally, almost glabrous. Prosternal process glabrous centrally, carinate, with short, abundant setae laterally, except on tumid, smooth, glabrous apex. Mesoventrite with short, decumbent, abundant setae, except on glabrous, tumid plate close to prosternal process, and sub-glabrous central area closer to mesoventral process. Mesepimerea, mesepisternum and metepisternum with short, decumbent, abundant setae. Mesoventral process without tubercle. Metaventrite minutely, sparsely punctate, interspersed with fine, sparse punctures toward center; with narrow band of short, decumbent setae laterally and along metacoxal cavities; remaining surface with short, sparse setae interspersed with some long, erect, sparse setae. Scutellum with minute setae laterally, glabrous centrally. **Elytra.** Opaque, coriaceous, mainly in basal half; very finely vermiculate into network (less distinct toward apex) with punctures in center of nearly all areas delimited by network; glabrous, except for minute, sparse setae near apex, interspersed with some long, erect setae; apex bispinose (spines long, with sutural one more distinctly spiniform); area between apical spines truncate. **Legs.** Profemora sub-fusiform; mesofemora sub-clavate; metafemora clavate; apices of meso- and metafemora with triangular lobe; metafemora with fringe of decumbent setae on peduncle and base of club. Metatibiae not longitudinally sulcate laterally.

Abdomen. Abdominal ventrites I–IV with short, decumbent, very sparse setae, slightly more abundant laterally, mainly on ventrites III–IV; with long, erect, sparse setae, more abundant on III–IV. Apex of ventrite V rounded, slightly emarginate centrally.

Dimensions in mm (male). Total length 31.60; length of prothorax at center 4.90; greatest width of prothorax 5.30; anterior width of prothorax 3.85; posterior width of prothorax 4.85; humeral width 7.50; elytral length 23.10.

Type material. Holotype male from BRAZIL, *Rondônia*: 62 km SW Ariquenes (near Rancho Grande Farm), 4-16.XI.1997, J. E. Eger col. (FSCA).

Etymology. Named for Sergio A. Fragoso, 20th century Brazilian worker and major contributor to the taxonomy of American Cerambycini (including *Coleoxestia*).

Remarks. *Coleoxestia fragosoi* sp. nov. is similar to *C. errata* Martins and Monné, 2005, but differs as follows: general color darker; antennomeres V–X more distinctly serrate at outer side (Fig. 22); femora (Fig. 27–29) thicker, more fusiform. In *C. errata* (Fig. 26) the general color is light, more reddish brown, the antennomeres V–X (Fig. 26) are less distinctly serrate at outer side, and the femora (Fig. 30–32) are thinner and more clavate. It differs from *C. vittata* (Thomson, 1861) by the femora and elytra monochorous (bichorous in *C. vittata*).

Coleoxestia fragosoi sp. nov. is included below in the alternative of couplet “38” from Martins and Monné (2005) (translated; modified):

- 38(37). Scape with very weak microsculpture, shining in appearance **38'**
 – Scape microsculptured, opaque in appearance. Brazil (Goiás, Mato Grosso do Sul, Pernambuco, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Bolivia (Santa Cruz) ***C. pubicornis* (Gounelle, 1909)**
- 38'(38). General color from light brown to reddish brown; antennomeres V–X slightly serrate at outer side; femora (Fig. 30–32) slender and more clavate; Brazil (Bahia, Minas Gerais, Rio de Janeiro, São Paulo, Santa Catarina), Bolivia (Santa Cruz) ***C. errata* Martins and Monné, 2005**
 – General color black; antennomeres V–X distinctly serrate at outer side; femora (Fig. 27–29) thicker and more fusiform; Brazil (Rondônia) ***C. fragosoi* sp. nov.**

***Coleoxestia hovorei* sp. nov.**

(Fig. 33–39)

Description. Holotype male. Integument black; mouthparts reddish brown; antennae gradually light reddish brown toward distal segments; profemora reddish brown except black peduncle and distal quarter of club; meso- and metafemora dark brown on base and ventral side of peduncle, with remaining surface gradually reddish brown toward black quarter; protibiae black on basal 4/5, reddish brown on distal 1/5; meso- and metatibiae black on basal third, gradually reddish brown toward apex; tarsi dark brown with reddish brown areas; apex of abdominal ventrites I–IV with narrow, reddish-brown band.

Head. Frontal plate kite-shaped, well-marked, tumid, finely punctate close to clypeus and laterally close to frontal depression; remaining surface smooth; with minute, sparse setae laterally. Frontal depression well-marked, coarsely, confluent punctate; with minute, sparse setae interspersed with short, erect setae (slightly longer close to eyes). With distinct, narrow carina from frontal plate to between upper eye lobes. Area between upper eye lobes smooth close to eyes, coarsely, shallowly punctate close to carina; with long, erect, sparse setae close to eyes, glabrous on remaining surface. Area between upper eye lobes and prothoracic margin coarsely, abundantly punctate (punctures oblong toward prothorax), except for smooth, narrow central band, not reaching margin of prothorax, glabrous except for long, erect setae close to eyes. Epicranial suture distinct only on frontal plate and base of carina. Area behind upper eye lobes coarsely, abundantly punctate; with long, erect, sparse setae close to eyes, glabrous on remaining surface. Area behind lower eye lobes narrowly tumid close to eye, smooth, glabrous toward upper eye lobe, coarsely punctate toward ventral side, with long, erect, sparse setae in punctate region; area close to tumid region sulcate, glabrous; area between sulcus and prothorax coarsely, abundantly punctate (punctures gradually sparser toward ventral side), glabrous. Genae finely, sparsely punctate ventrally, smooth dorsally; with minute, sparse setae interspersed with long, erect setae ventrally, glabrous dorsally. Submentum opaque, densely minutely punctate, interspersed with coarse, smooth punctures; with short and long, abundant, erect setae. Postclypeus opaque in large central area, shining laterally; finely punctate in opaque region (more dense laterally), smooth in shining region; with

minute, sparse setae in opaque region, shiny region glabrous; with one long, erect seta on each side of opaque region. Labrum with anterior margin of coplanar region widely concave; with long, erect setae laterally in coplanar region, glabrous centrally; with fringe of setae on inclined apex. Antennal tubercles distinctly, abruptly elevated near central carina; coarsely, confluent punctate except for minutely punctate region close to apex; with long, erect, sparse setae. Distance between upper eye lobes 0.4 times length of scape; distance between lower eye lobes in frontal view 0.7 times length of scape. Antennae 1.3 times elytral length, reaching distal 1/11 of elytral apex. Scape coarsely punctate in basal half of dorsal and lateral surface, gradually finer toward apex; with short, erect setae dorsally; with long, erect, sparse setae ventrally. Antennomere III with short, sparse setae interspersed with long, erect setae ventrally; apex nodose-flattened. Antennomere IV with apex semi-angulose. Antennomeres V–VII with apex ortho-angulose. Antennomeres VIII–X with apex acute-angulose. Antennomere XI not divided; greatest width 0.16 times its length. Antennal formula (ratio) based on antennomere III: scape = 0.55; pedicel = 0.15; IV = 0.54; V = 0.53; VI = 0.51; VII = 0.52; VIII = 0.50; IX = 0.47; X = 0.44; XI = 0.73.

Thorax. Prothorax as long as wide; lateral tubercles distinct; sides of prothorax between peripheral and semiperipheral sulcus coarsely, abundantly punctate close to pronotum, gradually finer, sparser toward ventral side, with long, erect, sparse setae. Pronotum with peripheral sulcus well-marked throughout (shallower centrally); fusiform plate well-marked, narrowed laterally; surface with five gibbosities (two anterolateral distinctly more elevated); discal area between anterior and posterior constrictions plicate, except on smooth central gibbosity in basal half, interspersed with coarse, sparse punctures between anterior constriction and anterolateral gibbosities, coarsely, abundantly punctate on sides of smooth basal gibbosity; sides coarsely, abundantly punctate, slightly plicate in basal half; glabrous, except for long, erect, sparse setae laterally (mainly in basal half). Prosternum coarsely, sparsely punctate laterally in basal inclined area, impunctate centrally, plicate centrally close to middle, with short and long, erect setae laterally (short setae denser close to procoxal cavities), glabrous centrally; area between middle and peripheral sulcus tumid, with short, sparse setae centrally, longer laterally. Prosternal process flat, with distinct tubercle near apex, minutely, densely punctate, interspersed with coarse, shallow punctures centrally; glabrous centrally, with short and long setae laterally. Mesoventrite finely, sparsely punctate (punctures slightly coarser on sides of center); with short, abundant setae interspersed with some long, erect setae. Mesepimeron, mesa- and metepisternum with short, decumbent, abundant setae. Mesoventral process without tubercle. Metaventrite very finely and sparsely punctate laterally, gradually coarsely, more abundant toward center; sides and area close to metacoxal cavities with very narrow band with short, decumbent pubescence (more distinct close to metacoxal cavities); remaining surface with short, sparse setae, gradually longer, more abundant toward center. Scutellum with minute, sparse setae laterally, glabrous centrally, with fringe of short setae at margin. **Elytra.** Opaque, coriaceous, mainly in basal half, very finely vermiculate into network (less distinct toward apex) with punctures in center of nearly all areas delimited by network (punctures gradually finer, sparser toward apex); glabrous, except for long, erect, sparse setae, mainly in distal quarter, and minute, sparse setae near apex; apex bispinose; margin of area between spines concave. **Legs.** Profemora sub-fusiform; meso- and metafemora clavate; meso- and metafemora with fringe of erect setae on peduncle; apices of meso- and metafemora with rounded lobes.

Abdomen. Ventrites I–IV with short, decumbent, sparse setae centrally, more abundant laterally, mainly on ventrites III–IV, with long, erect, sparse setae centrally, more abundant laterally, mainly on ventrites III–IV; ventrite V with short and long, sparse setae; distal margin of ventrite V widely concave.

Dimensions in mm (male). Total length 32.7; length of prothorax at center 5.6; greatest width of prothorax 5.6; anterior width of prothorax 4.3; posterior width of prothorax 5.4; humeral width 7.7; elytral length 23.2.

Type material. Holotype male from ECUADOR, *Pichincha*: Tinalandia (12 km E Santo Domingo de los Colorados; ca. 2500'), 11-17.V.1986, J. E. Eger col. (FSCA).

Etymology. Named for Frank T. Hovore for his many contributions to our knowledge of American Cerambycidae taxonomy.

Remarks. *Coleoxestia hovorei* sp. nov. (Fig. 33–39) differs from *C. femorata* as follows: basal antennomeres sparsely pubescent; pronotum less distinctly plicate; elytra less distinctly coriaceous, mainly toward apex, without minute setae throughout. In *C. femorata* the basal antennomeres (Fig. 15) are distinctly pubescent, the pronotum is more distinctly plicate (Fig. 21) and the elytra are more distinctly coriaceous with minute setae throughout (Fig. 21). It differs from *C. errata* (Fig. 26) mainly by the body more robust and the femora (Fig. 36–38) thicker than in *C. errata* (Fig. 30–32). It differs from *C. guttula* Martins and Monné, 2005 by the basal antennomeres sparsely pubescent (more densely pubescent in *C. guttula*), the pronotum less abundantly punctate, the elytra slightly coriaceous (as in *C. femorata* and in *C. guttula*), and the metatibiae not distinctly carinate laterally (carinate in *C. guttula*).

Coleoxestia hovorei sp. nov. is included below in the alternative of couplet “16” from Martins and Monné (2005) (translated; modified):

- 16'(15). Basal antennomeres sparsely pubescent; elytra not strongly coriaceous; Ecuador
 ***C. hovorei* sp. nov.**
 – Basal antennomeres densely pubescent; elytra distinctly coriaceous throughout **16**
- 16(16'). General appearance elongate, slender; metafemora narrow, with club less distinct; metatibiae carinate only in basal half; Brazil (Pará, Goiás, Espírito Santo, São Paulo), Bolivia
 ***C. femorata* (Gounelle, 1909)**
 – General appearance robust, short; metafemora thick, with thick club; metatibiae carinate throughout; Brazil (Minas Gerais) ***C. guttula* Martins and Monné, 2005**

***Coleoxestia rafaeli* sp. nov.**

(Fig. 40–47)

Description. Holotype male. Integument dark brown, almost black in some areas; antennae gradually dark reddish brown toward distal antennomeres; elytra gradually reddish brown toward apex; femora black on base of peduncle, gradually dark reddish brown toward club, peduncle dark reddish brown, slightly darker on apex.

Head. Frontal plate with margin close to clypeus rounded and area close to frontal depression not well delimited; finely, sparsely punctate laterally, smooth on remaining surface; with minute, sparse setae in anterolateral area, glabrous on remaining surface. Frontal depression well-marked, finely, shallowly punctate; with minute, sparse setae. Longitudinal carina very narrow and low between frontal plate and area between antennal tubercles, distinctly wider, more elevated toward posterior margin of upper eye lobes. Area between upper eye lobes smooth, with long, erect, sparse setae close to eyes. Area between upper eye lobes and prothoracic margin coarsely, abundantly punctate (punctures oblong toward prothorax); with minute, erect, sparse setae, gradually absent toward prothorax. Epicranial suture distinct from middle of frontal plate to base of antennal tubercles. Area behind upper eye lobes coarsely, abundantly punctate; with some long, erect setae close to eye; remaining surface glabrous. Area behind lower eye lobes narrowly tumid close to eye, smooth, glabrous toward upper eye lobe, coarsely punctate toward ventral side, with long, erect setae in punctate region; area close to tumid region sulcate, glabrous; area between sulcus and prothorax coarsely, abundantly punctate (punctures oblong, more dense close to prothorax), glabrous. Genae finely, very sparsely punctate ventrally, smooth dorsally; with minute, sparse setae interspersed with long, erect, sparse setae ventrally, glabrous dorsally. Submentum with minute, sparse punctures interspersed with some coarser, shallow punctures; with short and long, abundant, erect setae. Postclypeus smooth centrally, finely, sparsely punctate on sides of central region, smooth laterally; with minute, very sparse setae and one long, erect seta in punctate region. Labrum with anterior margin of coplanar region widely concave; finely, sparsely punctate; coplanar region with long, erect setae laterally, short centrally; with fringe of long setae on [inclined, slanted?] apex. Antennal tubercles with apex elevated, narrowed; finely, sparsely punctate throughout; with minute, sparse setae. Distance between upper eye lobes 0.25 times length of scape; distance between lower eye lobes in frontal view 0.50 times length of scape. Antennae 1.5 times elytral length, reaching elytral apex at apex of antennomere X. Scape coarsely, abundantly, confluent punctate, finer, sparser near

apex; with minute, sparse setae interspersed with some long, erect setae. Antennomere III with long, erect setae on inferior margin of inner side; sensorial area present in distal third; distinctly widened toward apex; apex angulose at outer side, rounded at inner side. Antennomeres IV–XI with sensorial area present from base to apex. Antennomeres IV–V with apex ortho-angulose. Antennomeres VI–X with apex acute-angulose. Antennomere XI not divided; greatest width 0.13 times its length. Antennal formula (ratio) based on antennomere III: scape = 0.65; pedicel = 0.13; IV = 0.65; V = 0.75; VI = 0.75; VII = 0.75; VIII = 0.75; IX = 0.75; X = 0.74; XI = 1.06.

Thorax. Prothorax wider than long (greatest width 1.1 times length); lateral tubercles distinct; sides of prothorax coarsely vermiculate-punctate between peripheral and semiperipheral sulcus; with long, sparse, erect setae. Pronotum with periphery narrowed laterally; surface with five gibbosities (two anterolateral more distinct and elevated); area between anterior and posterior constrictions coarsely plicate, less so on anterolateral and central gibbosities, interspersed with sparse, shallow punctures; with short, sparse, erect setae in basal half of disc, longer, more abundant laterally. Prosternum coarsely, sparsely punctate in basal half, with short, sparse setae (slightly denser close to procoxal cavities) interspersed with some long, erect setae; area between middle and peripheral sulcus tumid, transverse band with coarse, oblong, shallow punctures centrally; and minute, short sparse setae. Prosternal process slightly longitudinally elevated centrally; longitudinal central region smooth, glabrous; sides finely, abundantly punctate, with minute, abundant setae. Mesoventrite with short, decumbent, abundant setae, glabrous laterally on inner side. Mesepimeron, mesepisternum and metepisternum with short, abundant, decumbent setae. Mesoventral process without tubercle. Metaventrite finely, sparsely punctate; sides and area close to metacoxal cavities with narrow band of short, decumbent, abundant setae; with long, erect, sparse setae near central area; almost glabrous centrally, and areas between with short and long setae. Scutellum with minute, sparse setae, except for basal half of lateral sides with denser setae. **Elytra.** Opaque, slightly coriaceous, very finely vermiculate into network (less distinctly toward apex) with puncture in center of nearly all areas delimited by network (punctures gradually finer, sparser toward apex); glabrous, except for long, sparse setae in distal fifth; apex bispinose; margin of area between spines truncate, slightly oblique. **Legs.** Profemora sub-fusiform; meso- and metafemora clavate; meso- and metafemora with fringe of setae on peduncle and base of club; apices of meso- and metafemora rounded, not distinctly lobed.

Abdomen. Ventrites with minute, sparse setae centrally, denser laterally; with long, erect, sparse setae centrally, slightly more abundant from I to V; distal margin of ventrite V truncate, centrally widely concave.

Variation. Integument dark, but more reddish; distal region of palpomeres yellowish brown; elytra slightly lighter; area of frontal plate close to frontal depression well-marked; punctures in frontal depression coarser close to antennal tubercles; frontal depression with a few long, erect setae; longitudinal carina absent on frons; punctures on ventral side of genae more abundant; submentum with minute punctures more abundant, distinctly denser centrally; punctures on antennal tubercles more abundant, coarser on base, finer, sparser toward apex; peripheral sulcus not narrowed centrally on pronotum; two anterolateral gibbosities on pronotum not more distinct and elevated; anterolateral gibbosities on pronotum plicate as on remaining surface; basal half of prosternum with punctures slightly more abundant and short and long setae more abundant; distal margin of ventrite V slightly emarginate centrally.

Dimensions in mm (holotype male–paratype male). Total length 26.85–26.25; length of prothorax at center 4.00–4.00; greatest width of prothorax 4.40–4.40; anterior width of prothorax 3.40–3.40; posterior width of prothorax 4.05–4.05; humeral width 5.85–5.60; elytral length 20.10–20.00.

Type material. Holotype male from BRAZIL, *Paraná*: Céu Azul, X.2015, R. C. Barros col. (MZSP). Paratype male from Brazil, *Santa Catarina*: Corupá, XII.1947, (no collector indicated) (FSCA).

Etymology. The new species is named after Rafael C. Barros, collector of the holotype which he kindly donated to MZSP collection.

Remarks. *Coleoxestia rafaelli* sp. nov. differs from *C. denticornis* (Gahan, 1892) as follows: scape less opaque and more distinctly punctate (Fig. 44); antennomere III longer (Fig. 40); femora more clavate (Fig. 45–47). In *C. denticornis* the scape is more opaque and less distinctly punctate (Fig. 48), the antennomere III is shorter (Fig. 48), and the femora are more fusiform (Fig. 49–51). It differs from *C. errata* mainly by the antennomere III angulose at apex (rounded in *C. errata*). It can be separated from *C. exotica* Martins and Monné, 2005 and *C. illex* (Gounelle, 1909) by the antennomere III distinctly longer and angulose at apex (shorter and rounded in *C. exotica* and *C. illex*). It differs from *C. ebenina* Melzer, 1935 by the general color lighter (black in *C. ebenina*) and the pronotum plicate (coarsely and abundantly punctate in *C. ebenina*). It differs from *C. pubicornis* (Gounelle, 1909) by the scape not distinctly coriaceous and abundantly punctate (coriaceous and not distinctly punctate in *C. pubicornis*), by the antennomeres III–IV with apex angulose (rounded in *C. pubicornis*), and by the femora more clavate (more distinctly fusiform in *C. pubicornis*). It differs from *C. setigera* Melzer, 1926 (Fig. 52) by the same differences as *C. denticornis* and by the pronotum and elytra without abundant, distinct short setae.

Coleoxestia rafaelli sp. nov. is included below in the alternative of couplet “22” from Martins and Monné (2005) (translated; modified):

- 22'(21). Elytra (20x) with short setae throughout; general color reddish; Brazil (São Paulo, Paraná, Santa Catarina) ***C. setigera* Melzer, 1926**
 – Elytra glabrous, without setae or, at most, with sparse setae on apex **22**
- 22(22'). Scape not distinctly opaque but distinctly punctate (Fig. 52); antennomere III longer (Fig. 52); femora clavate (Fig. 57–59); Brazil (Paraná, Santa Catarina) ***C. rafaelli* sp. nov.**
 – Scape distinctly opaque but only slightly punctate (Fig. 60); antennomere III shorter (Fig. 60); femora more fusiform (Fig. 61–63); Brazil (Mato Grosso do Sul, Goiás, Paraíba, Pernambuco, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Bolivia, Paraguay ***C. denticornis* (Gahan, 1892)**

New Record

***Coleoxestia rachelae* Eya and Chemsak, 2005** is recorded from Peru, **new country record**. PERU, *San Martin*: Escalera Lodge (Tarapoto; 435 m), 2 females, 9–12.X.2012, J. B. Heppner col. (FSCA). This species was described from, and remains known from, Costa Rica and Panama (Monné 2016). Among the features differentiating this species, the antennomere XI almost or completely divided into a 12th segment helps to define the species.

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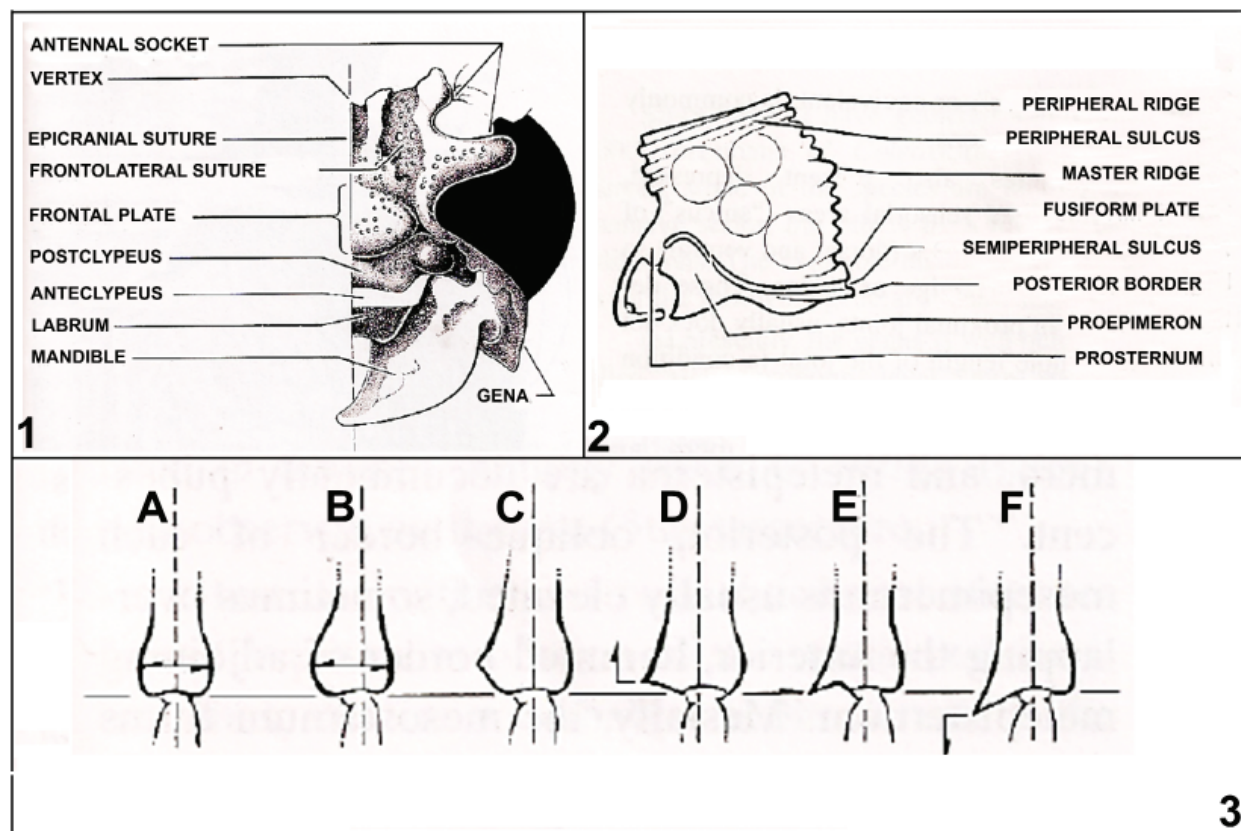
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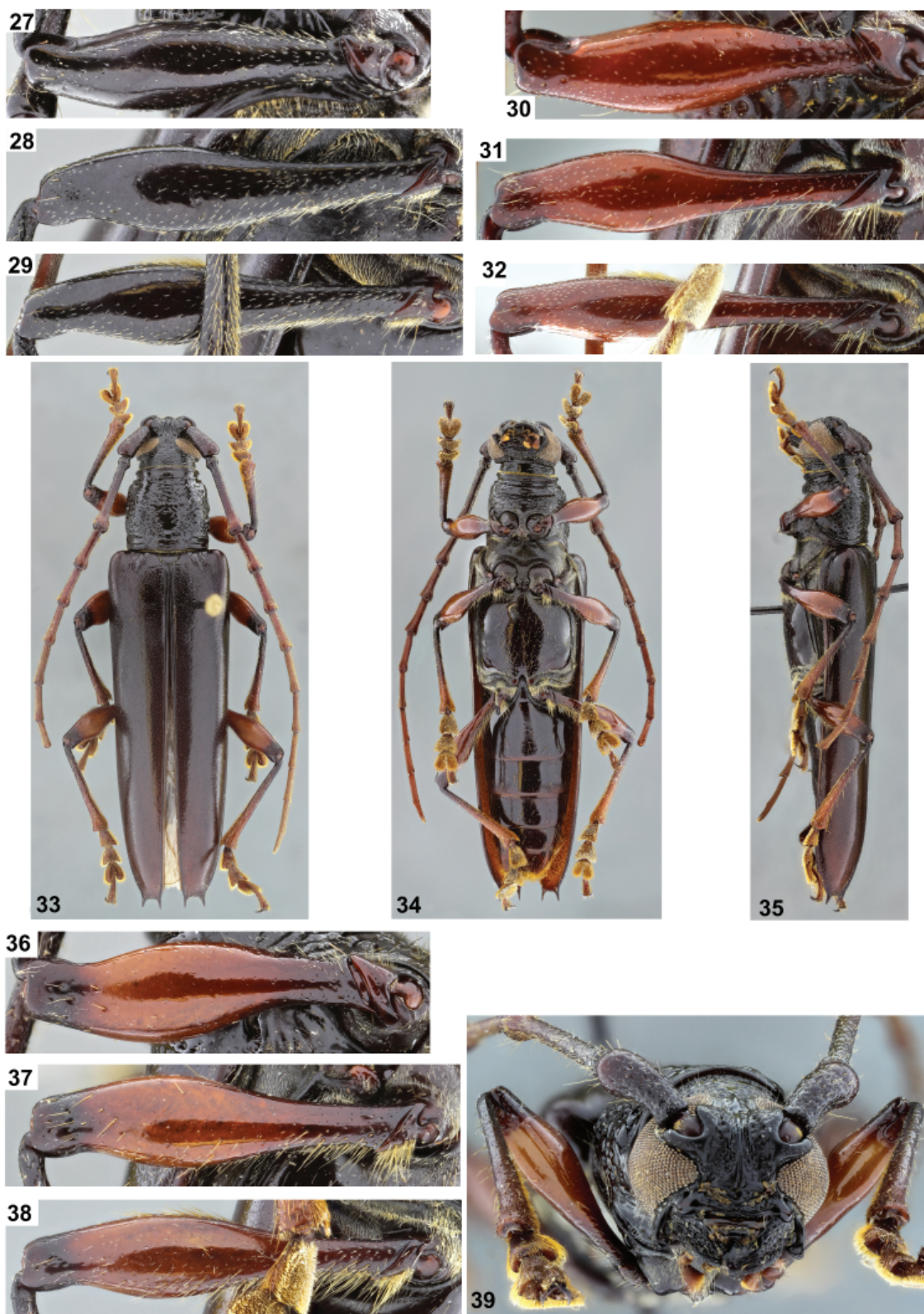
Figures 1–3. *Coleoxestia*, general descriptive terminology (Fragoso 1993). **1)** Head. **2)** Prothorax, shown in profile (diagrammatic). **3)** Antennomeres (diagrammatic): A – nodose; B – nodose-flattened; C – semi-angulose; D – obtusely angulose; E – ortho-angulose; F – acute-angulose.



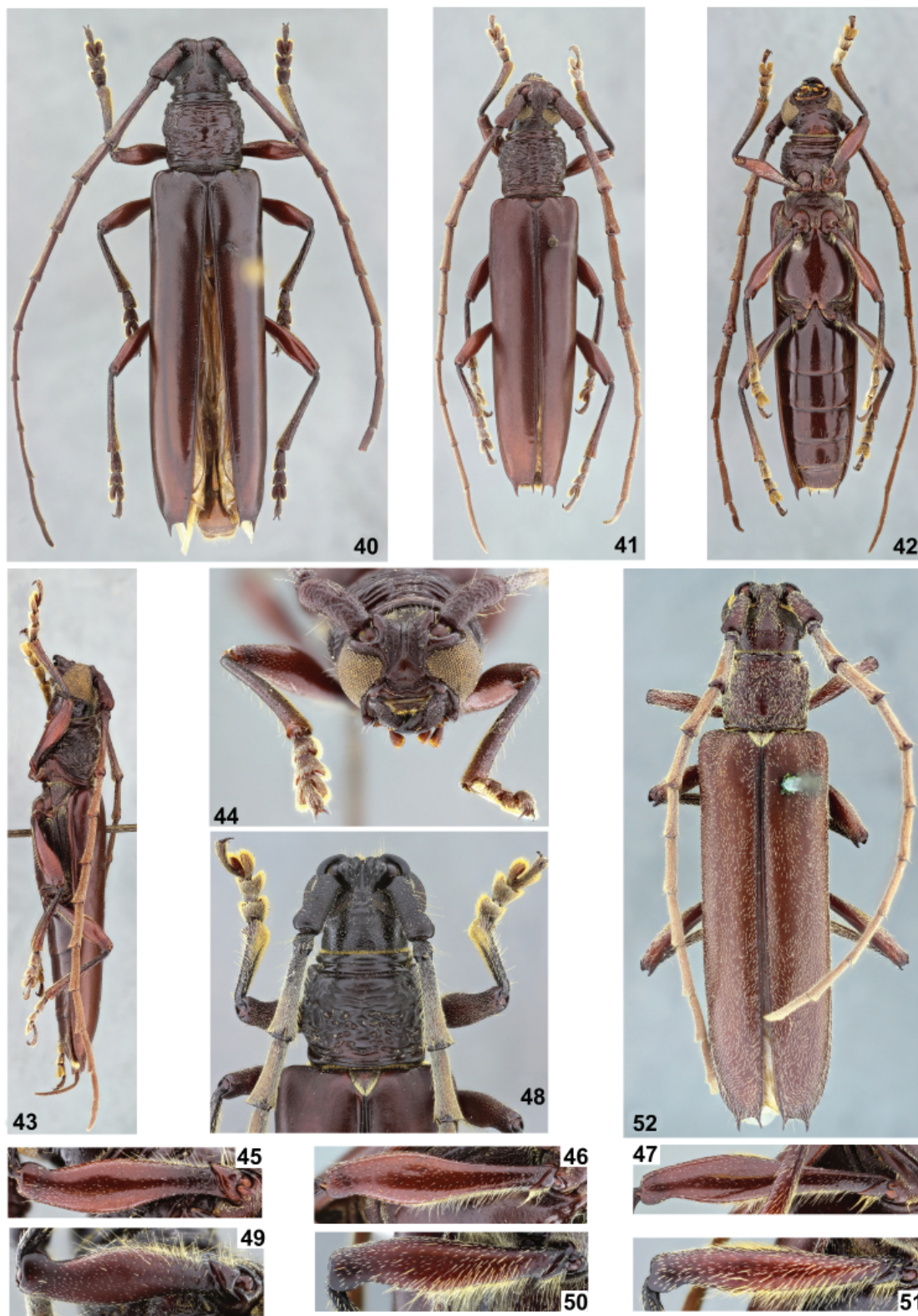
Figures 4–16. 4–8, *Coleoxestia clarkei* sp. nov.: 4) Holotype female, dorsal habitus. 5) Holotype female, ventral habitus. 6) Holotype female, lateral habitus. 7) Paratype male, dorsal habitus. 8) Holotype female, head. 9–12, *C. eyai* sp. nov., holotype male: 9) Dorsal habitus. 10) Ventral habitus. 11) Lateral habitus. 12) Head. 13) *C. chemsaki* sp. nov., holotype male, metatarsus. 14) *C. aurigena*, holotype female, metatarsus. 15) *C. femorata*, male, antennomere III. 16) *C. chemsaki* sp. nov., holotype male, antennomere III.



Figures 17–26. 17–21, *Coleoxestia chemsaki* sp. nov., holotype male: 17) Dorsal habitus. 18) Ventral habitus. 19) Lateral habitus. 20) Head. 21) *C. femorata*, male, dorsal habitus. 22–25, *Coleoxestia fragosoi* sp. nov., holotype male: 22) Dorsal habitus. 23) Ventral habitus. 24) Lateral habitus. 25) Head. 26) *C. errata*, holotype male, dorsal habitus.



Figures 27–39. 27–29, *Coleoxestia fragosoi* sp. nov., holotype male: 27) Profemur. 28) Mesofemur. 29) Metafemur. 30–32, *C. errata*, holotype male: 30) Profemur. 31) Mesofemur. 32) Metafemur. 33–39, *Coleoxestia hovorei* sp. nov., holotype male: 33) Dorsal habitus. 34) Ventral habitus. 35) Lateral habitus. 36) Profemur. 37) Mesofemur. 38) Metafemur. 39) Head.



Figures 40–52. 40–47, *Coleoxestia rafaelli* sp. nov.: 40) holotype male, dorsal habitus. 41) Paratype male, dorsal habitus. 42) Paratype male, ventral habitus. 43) Paratype male, lateral habitus. 44) Paratype male, head. 45) Paratype male, profemur. 46) Paratype male, mesofemur. 47) Paratype male, metafemur. 48–51, *C. denticornis*, male: 48) Head and pronotum. 49) Profemur. 50) Mesofemur. 51) Metafemur. 52) *C. setigera*, holotype male, dorsal habitus.

